United Nations A/70/833

General Assembly

Distr.: General
18 April 2016

Original: English

Seventieth session
Agenda item 14
2001-2010: Decade to Roll Back Malaria in Developing Countries, Particularly in Africa

Consolidating gains and accelerating efforts to control and eliminate malaria in developing countries, particularly in Africa, by 2015

Note by the Secretary-General

The Secretary-General has the honour to transmit to the General Assembly the report of the Director-General of the World Health Organization, submitted in accordance with General Assembly resolution 69/325.

16-06323 (E) 040516

Please recycle

Report of the Director-General of the World Health Organization on consolidating gains and accelerating efforts to control and eliminate malaria in developing countries, particularly in Africa, by 2015

Summary

The present report is submitted in response to General Assembly resolution 69/325. It provides a review of progress in the implementation of the resolution, focusing on the adoption and scaling-up of interventions recommended by the World Health Organization in malaria-endemic countries. It also provides an assessment of progress towards the 2015 global malaria targets, including Millennium Development Goal 6, targets set through the African Union and the World Health Assembly, and goals set through the Global Malaria Action Plan of the Roll Back Malaria Partnership. It elaborates on the challenges limiting the full achievement of the targets, and provides recommendations to ensure that progress is accelerated towards the goals of the Global Technical Strategy for Malaria 2016-2030 in the coming years.

I. Introduction

1. While malaria is a preventable and treatable disease, it continues to have a devastating impact on people's health and livelihoods around the world. In 2015, approximately 3.2 billion people were at risk of the disease in 95 countries and territories, and an estimated 214 million malaria cases occurred (uncertainty range: 149 million-303 million). The disease killed 438,000 people (uncertainty range: 236,000-635,000), mostly children under 5 years of age in sub-Saharan Africa. The World Health Organization (WHO) recommends a multi-pronged strategy to reduce the malaria burden, including vector control interventions, preventive therapies, diagnostic testing, quality-assured treatment and strong malaria surveillance.

2. The present report highlights progress and challenges in the control and elimination of malaria in the context of General Assembly resolution 69/325. It draws on the *World Malaria Report 2015*, issued by WHO in December 2015. The analysis is based on the latest available comprehensive data (2014) received from malaria-endemic countries and organizations supporting global malaria efforts and includes projections to 2015 where it is feasible to do so. Data from 2015 are currently being collected and reviewed by WHO. Projections for 2015 were also published in *The Millennium Development Goals Report 2015*.

3. Between 2005 and 2015, malaria received worldwide recognition as a priority global health issue. Under the umbrella of the Roll Back Malaria Partnership, endemic countries, United Nations agencies, bilateral donors, public-private partnerships, scientific organizations, academic institutions, non-governmental organizations (NGOs) and the private sector worked together to scale up WHO-recommended interventions, harmonize activities and improve strategic planning, programme management and funding availability. A steep rise in international funding enabled endemic countries to expand their malaria programmes. Since 2010, the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund) has provided more than $4 billion for malaria interventions, while the Governments of the United States of America and the United Kingdom of Great Britain and Northern Ireland have been the second and third largest bilateral funders.

4. The success of efforts to control and eliminate malaria is measured through an analysis of trends in the disease burden and intervention scale-up, and a review of progress made towards a set of global goals and targets, which have been designed through intergovernmental processes or set in the context of global initiatives. For the period 2000 to 2015, the four main sets of goals and targets were: Millennium Development Goal 6, targets set through the African Union and the World Health Assembly, and goals set by the Roll Back Malaria Partnership through the Global Malaria Action Plan. Further details are provided in section IV of the report. Regional and subregional targets for malaria control and elimination are not addressed here.

II. Current situation

5. Between 2000 and 2015, an expansion of malaria interventions helped to reduce malaria mortality rates by 60 per cent worldwide, averting an estimated 6.2 million deaths and reducing global malaria case incidence by 37 per cent.

Among children under 5 years of age, malaria death rates fell by 65 per cent globally and by 71 per cent in Africa. Malaria is no longer the leading cause of death among children in the African region.

6. Between 2000 and 2015, there was a downward trend in the rate of new malaria cases (incidence). The malaria-focused target of the Millennium Development Goals (target 6c), which called for halting and beginning to reverse the incidence of malaria by 2015, has been achieved. However, the disease remains concentrated in 15 countries, mainly in Africa; together, these countries account for 80 per cent of the world's malaria deaths. Two countries — the Democratic Republic of the Congo and Nigeria — account for approximately 35 per cent of malaria mortality worldwide. In South-East Asia, the second most affected part of the world, India has the highest malaria burden. Overall, progress in reducing the malaria burden has been faster in countries that had lower rates of transmission in 2000.

7. In September 2015, leaders of States Members of the United Nations unanimously adopted a new global development framework, the Sustainable Development Goals. Target 3.3 of the 2030 Agenda for Sustainable Development calls for ending the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases by the year 2030. Ensuring universal access to quality malaria prevention, diagnosis and treatment will be central to meeting this target and the vision of a malaria-free world set out in the Global Technical Strategy for Malaria 2016-2030.

Vector control measures

8. The scale-up of insecticide-treated bednet distribution[1] and indoor residual spraying programmes has been a critical factor in reducing disease transmission. About 178 million long-lasting insecticidal nets were delivered to countries in sub-Saharan Africa in 2015. That same year, an estimated 67 per cent of the population at risk of malaria had access to a bednet in their household, compared with less than 2 per cent in 2000. Meanwhile, the proportion of the at-risk population sleeping under an insecticide-treated net (representing the population directly protected) was 55 per cent in 2015.

9. Despite this progress, major disparities in access to insecticide-treated nets remain within and between countries. The primary reason for this has been a shortage of financial resources to procure and distribute enough bednets to cover all affected communities. It is encouraging, however, that in all countries surveyed, insecticide-treated bednet use is higher in the two most vulnerable groups — children under 5 years of age and pregnant women — than national averages.

10. National malaria control programmes also conduct regular indoor spraying of homes to reduce the mosquito population that can carry the disease. In 2014, 116 million people were protected through this intervention. The proportion of the population at risk protected by indoor residual spraying has declined globally, from a peak of 5.7 per cent in 2010 to 3.4 per cent in 2014, with decreases seen in all regions except the WHO Eastern Mediterranean Region. The proportion of the population at risk protected by indoor residual spraying was 6 per cent in

[1] Although WHO recommends the use of long-lasting insecticidal nets, given the continued use of conventional insecticide-treated nets, especially outside of Africa, the more generic term "insecticide-treated nets" is used throughout the present document.

sub-Saharan Africa in 2014, and 70 per cent in countries where such spraying is the primary method of vector control.

11. While current vector control tools remain effective, there is an urgent need to manage increasing mosquito resistance to insecticides in all endemic countries, and to develop new formulations of insecticides and new tools. Since 2010, insecticide resistance has been reported from 52 countries around the world, including in most endemic countries in Africa. In 2012, WHO and the Roll Back Malaria Partnership released the Global Plan for Insecticide Resistance Management in Malaria Vectors, which provides tailored guidance to countries, partners and the private sector. Most malaria-endemic countries are now undertaking insecticide resistance monitoring but few countries have drawn up detailed plans to manage resistance.

Diagnostic testing and treatment

12. Artemisinin-based combination therapies are currently the most effective medicines for uncomplicated malaria caused by the Plasmodium parasite (*P. falciparum* is the most lethal malaria parasite and is responsible for the large majority of cases in Africa). In recent years, the increasing proportion of malaria cases treated with an artemisinin-based combination therapy can be linked to the increasing numbers of such treatments delivered by manufacturers and distributed by national malaria control programmes. The number of artemisinin-based combination therapy treatment courses procured from manufacturers increased from 11 million in 2005 to 337 million in 2014. In April 2015, WHO released a new edition of its malaria treatment guidelines, which included updated guidance on appropriate weight-based dosing of antimalarials.

13. WHO recommends diagnostic testing of all suspected malaria cases when patients seek treatment at health clinics, pharmacies or with community health workers. Rapid diagnostic tests are now widely available; 314 million such tests were purchased in 2014, compared with fewer than 50 million in 2008. This has occurred in parallel with a gradual improvement in the quality of rapid diagnostic tests, as demonstrated by the WHO Malaria Rapid Diagnostic Test Product Testing Programme, jointly managed by WHO, the United States Centers for Disease Control and Prevention and the Foundation for Innovative New Diagnostics.

14. Despite a significant expansion of malaria diagnostic testing and treatment in recent years, millions of people still lack access to these services. In 2014, approximately 80 per cent of all children under 5 years of age with malaria (an estimated 92 million cases) in sub-Saharan Africa did not receive an artemisinin-based combination therapy at all. Similar coverage gaps have been seen in relation to preventive treatments, which are recommended for the most vulnerable groups in sub-Saharan Africa: pregnant women, children under 5 years of age and infants. Such treatments are highly cost-effective and have the potential to save tens of thousands of lives each year.

15. Community-based health programmes can significantly reduce malaria-related child mortality in rural communities, and the approach is being scaled up around the world. The Government of India, for example, has deployed more than 900,000 accredited social health activists across the country in the past 10 years. The activists provide a basic package of curative care to all age groups, make timely referrals and promote immunization and other public health services. In Africa, WHO and UNICEF have helped countries expand efforts to scale up integrated

community case management programmes, through which community health workers are trained to diagnose and treat children under 5 years of age for malaria, pneumonia and diarrhoea. Through the Rapid Access Expansion Programme, funded by the Government of Canada and supported by WHO and NGOs, more than 7,100 community health workers have been trained and deployed in five African countries since 2013, treating more than 1.7 million cases of malaria, more than 900,000 cases of pneumonia and nearly 700,000 cases of diarrhoea among children under 5 years of age.

16. The outbreak of Ebola virus disease in Guinea, Liberia and Sierra Leone (2014-2015) severely compromised the health systems of those countries. To manage and reduce the malaria burden, WHO issued guidance on the prevention, diagnosis and treatment of malaria in Ebola-affected areas, including recommending the use of mass drug administration in Ebola hot spots to reduce the number of malaria cases. With support from UNICEF, the Global Fund and other partners, the Government of Sierra Leone carried out two rounds of mass drug administration, covering more than 2.6 million people between December 2014 and January 2015. The Government of Liberia reached more than 300,000 people with its mass drug administration campaign in the capital, Monrovia. WHO and partners are now helping affected countries to rehabilitate health-care services, scale up malaria interventions, address the shortages of diagnostic tests and drugs and strengthen malaria surveillance.

Increasing drug resistance

17. During the past year, the extent of multi-drug resistance (including resistance to artemisinin-based combination therapies) has significantly worsened in the Greater Mekong subregion of South-East Asia. Unless the issue is urgently addressed, drug-resistant malaria could become a major global public health threat, weakening our current tools to fight the disease. Following the launch of the emergency response to artemisinin resistance in the Global Mekong subregion in 2013, WHO set up a biregional programme in Phnom Penh to coordinate the multi-stakeholder response. The hub works closely with ministries of health in Cambodia, China, the Lao People's Democratic Republic, Myanmar, Thailand and Viet Nam, as well as with a range of development partners.

18. To tackle emerging multi-drug resistance, WHO has recommended an urgent scale-up of malaria prevention measures across the subregion, and a recalibration of efforts from resistance containment to regional malaria elimination by 2030. This follows the conclusion by the WHO Malaria Policy Advisory Committee in September 2014 that *P. falciparum* elimination was feasible by 2030 and should be started as soon as possible. WHO launched the Strategy for Malaria Elimination in the Greater Mekong Subregion (2015-2030) in May 2015 to support affected countries to reorient their national programmes to target malaria elimination. In developing the strategy, WHO coordinated closely with countries and development partners and the draft document was reviewed and endorsed by the Committee.

19. The continued availability and use of oral artemisinin-based monotherapies poses a major risk to malaria control efforts globally, and has contributed to the emergence of artemisinin resistance. WHO has long recommended the withdrawal of oral artemisinin-based monotherapies from the market, and their replacement with combination therapies, as endorsed by the World Health Assembly in 2007.

However, according to the latest available information, these medicines are still marketed by at least 25 companies around the world. Globally, 49 countries have withdrawn marketing authorization for these medicines but 7 countries continue to allow their marketing.

Malaria surveillance

20. While malaria case detection rates are gradually improving, only every seventh case is captured by surveillance systems globally. In 39 endemic countries, it is not possible to make a reliable assessment of malaria trends owing to incompleteness or inconsistency in reporting over time, or changes in diagnostic practice or health service utilization. There is a critical need to strengthen malaria surveillance systems to enable ministries of health to identify gaps in programme coverage and to respond effectively to disease outbreaks. Strong surveillance also helps to guide changes in programme planning and implementation so that resources can be directed to populations most in need and can help to assess the impact of interventions.

21. Strengthening surveillance systems is one of the three pillars of the WHO Global Technical Strategy for Malaria (2016-2030). The strategy urges countries to substantially expand malaria surveillance and transform it into a core intervention, as important as vector control, diagnostic testing or treatment. In addition to helping to accelerate progress towards the proposed 2030 targets, increased investments in malaria surveillance will ease the current reliance on model-based disease estimation methods and enable national decision makers and the global health community to build on more reliable health information and malaria data.

22. The strengthening of malaria surveillance has also been an important pillar of the WHO initiative known as "T3: Test. Treat. Track", which was launched by the WHO Director-General in Namibia in April 2012. As part of the T3 push, WHO encourages malaria-endemic countries and global malaria partners to scale up diagnostic testing, quality-assured treatment and surveillance to amplify the impact of prevention measures, and further accelerate progress. The initiative was built on the core WHO malaria guidance documents: the *Universal Access to Malaria Diagnostic Testing: an Operational Manual*; the *Guidelines for the Treatment of Malaria*, and the operational manuals on *Disease Surveillance for Malaria Control* and *Disease Surveillance for Malaria Elimination*.

Elimination and certification

23. Twenty-nine endemic countries are close to eliminating malaria and their malaria programmes are currently in the pre-elimination, elimination or prevention of reintroduction phase. However, many more countries have declared malaria elimination as a national goal. In recent years, elimination efforts have been intensified in many parts of Africa — including in the "Elimination 8" countries of Southern Africa (Angola, Botswana, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe), in Central America and Hispaniola, as well as in South-East Asia. In 2015, zero indigenous cases were reported from the WHO European Region for the first time, in line with the Tashkent Declaration to eliminate malaria from the region by 2015. Since 2000, four countries have been certified by WHO as free of malaria: the United Arab Emirates (2007), Morocco

(2010), Turkmenistan (2010), and Armenia (2011). In addition, the malaria elimination certification process is under way for Kyrgyzstan and Argentina.

24. In many countries nearing elimination, malaria transmission occurs mostly in areas with limited transport and public health infrastructure, often near international borders, and a high proportion of malaria cases are seen among migrant and mobile populations. In these countries, progress towards elimination will require improved commodity delivery strategies and an expansion of access to health services for affected groups. Strong regional and cross-border collaboration and improvements in diagnostic tools are also essential for sustaining progress.

New global guidance from the World Health Organization

25. The Global Technical Strategy for Malaria 2016-2030 was adopted by the 68th World Health Assembly in May 2015, in its resolution WHA68.2. The strategy is aimed at providing countries with evidence-based technical guidance for the next 15-year period. The strategy was developed in close consultation with endemic countries and partners, and the process was overseen by the Malaria Policy Advisory Committee and a dedicated steering committee.

26. The target of the strategy is set to reduce the malaria disease burden by at least 40 per cent by 2020 and by at least 90 per cent by 2030. It also aims to eliminate the disease in at least 35 new countries by 2030. The document is built on the following three pillars: (a) ensure universal access to malaria prevention, diagnosis and treatment; (b) accelerate efforts towards elimination and the attainment of malaria-free status; and (c) transform malaria surveillance into a core intervention. The pillars are complemented by two supporting elements: (a) harnessing innovation and expanding research; and (b) strengthening the enabling environment. In the document, WHO emphasizes that progression towards malaria-free status does not consist of a set of independent phases; instead, it is a continuous process requiring subnational stratification by malaria risk. It also recognizes that strong health systems are crucial for reducing the disease burden and the potential for onward transmission of parasites, as well as enabling the adoption and introduction of new tools and strategies within the shortest possible time frame.

27. The strategy provides the technical underpinning for the Roll Back Malaria Partnership *Action and Investment to Defeat Malaria 2016-2030*, which was released in 2015. The focus of the document is how the WHO strategy could best be implemented though global advocacy, resource mobilization, partner harmonization and the engagement of the transportation, industry, tourism, education and other public sectors, as well as the private sector. Multiple Sustainable Development Goals will be contingent on the success of malaria efforts.

28. Since the previous progress report was prepared for the General Assembly in May 2015 (A/68/854), WHO has issued recommendations on the use of mass drug administration; on intermittent screening and treatment in pregnancy; on the use of long-lasting insecticidal nets treated with a pyrethroid and piperonyl butoxide; and on the risks associated with vector control scale-back. Other key malaria guidance includes a technical brief on the control and elimination of *Plasmodium vivax* malaria and an information note on recommended selection criteria for the procurement of malaria rapid diagnostic tests.

Regional collaboration and political commitment

29. In the Asia-Pacific region, recent years have witnessed growing political commitment to address the challenge of drug-resistant malaria. Countries of the region, with leadership from Australia and Viet Nam, launched the Asia Pacific Leaders Malaria Alliance at the East Asia Summit, held in Brunei Darussalam in October 2013. In November 2014, 18 Heads of State at the East Asia Summit made a commitment to eliminate the disease from the Asia and Pacific region by 2030. WHO welcomed this initiative and has been supporting the secretariat of the Alliance at the Asian Development Bank, in Manila with technical advice.

30. African Heads of State and Government continued to meet twice a year for a dedicated malaria forum at the African Union Summit to reaffirm their commitment to eliminating malaria by 2030. In 2016, 49 Member States were working together under the aegis of the African Leaders Malaria Alliance. At the most recent forum in January 2016, African leaders reiterated their commitment to eliminate malaria on the continent. Thirteen countries received an award from the Alliance for the commitment and innovation they have shown in the fight against malaria. During that forum, the President of Chad was appointed as the new Chair of the Alliance.

III. Urgent funding needs

31. While global investments (including domestic and international funding) for malaria control have increased from an estimated $960 million in 2005 to $2.5 billion in 2014, available funding remains below the estimated $5.1 billion required annually to achieve universal coverage of malaria interventions in all endemic countries. Of the $2.5 billion invested in 2014, international donors contributed $1.9 billion and the Governments of malaria-endemic countries contributed $550 million.

32. To achieve the targets and goals set out in the WHO Global Technical Strategy for Malaria 2016-2030, global investments, including international and domestic contributions, need to increase to an estimated $6.4 billion per year by 2020 to reach a 40 per cent reduction in malaria incidence and mortality rates. Beyond 2020, annual investments will need to increase to an estimated $7.7 billion by 2025 to reach a 75 per cent reduction in the malaria burden, and to $8.7 billion by 2030 to meet the goal of a 90 per cent reduction in the malaria burden.

IV. Progress towards global goals and targets

33. The success of past efforts to control and eliminate malaria was measured through progress made towards a set of 2015 targets, which were designed through intergovernmental processes or set in the context of global initiatives. Progress is summarized each year by WHO in the *World Malaria Report*, which provides a comprehensive overview of trends in programme financing, intervention coverage and malaria cases and deaths. Data are received from national malaria control programmes in endemic countries — through WHO regional offices — and are complemented by information received through household surveys, notably demographic and health surveys, multiple indicator cluster surveys and malaria indicator surveys.

34. Assessing the progress of a country towards global targets has been challenging in many high-burden countries in Africa, since only a fraction of malaria cases and deaths are effectively captured by disease surveillance systems. In 31 of these countries, an assessment of malaria trends can only be made using burden estimation methods that rely on a modelled relationship between malaria parasite prevalence and case incidence or mortality.

Millennium Development Goal 6

35. Together with HIV/AIDS and other diseases, malaria control was included under Millennium Development Goal 6. The malaria-specific target of Goal 6 was to: "have halted by 2015 and begun to reverse the incidence of malaria". Given that malaria accounts for 7 per cent of under-5 mortality globally, malaria control efforts made an important contribution to progress towards Goal 4, target 4.A: to reduce by two thirds, between 1990 and 2015, the under-5 mortality rate. Global malaria efforts have also helped to accelerate progress towards Millennium Development Goals 1, 2, 3, 5 and 8.

36. An assessment of global malaria trends between 2000 and 2015 indicates that the world has achieved Goal 6, target 6.C. Between 2000 and 2015, malaria incidence rates — which take into account population growth — were reduced by 37 per cent globally, and by 42 per cent in Africa. The malaria mortality rate decreased by 60 per cent worldwide during the same period, and the decline in Africa was 66 per cent. Based on reported data, 57 countries have reduced malaria incidence rates by at least 75 per cent since 2000.

37. It is estimated that a cumulative 1.2 billion fewer malaria cases and 6.2 million fewer malaria deaths occurred globally between 2001 and 2015 than would have been the case had incidence and mortality rates remained unchanged since 2000. Of the estimated 6.2 million deaths averted, 5.9 million (95 per cent) were in children under 5 years of age. As a result of the substantial reductions in malaria mortality, malaria is no longer the leading cause of death among children in sub-Saharan Africa. It is estimated that 70 per cent of the 943 million cases of malaria averted in sub-Saharan Africa are attributable to malaria control interventions. Additional progress is likely related to increased urbanization as well as overall economic development.

Abuja targets

38. By adopting the Abuja Declaration on Roll Back Malaria in Africa, and its plan of action, at the Extraordinary Summit of African Heads of State and Government, held in Abuja in April 2000, leaders of malaria-endemic countries in Africa committed themselves to halving malaria mortality by 2010. This target was later extended to 2015. The Abuja Declaration also contained a commitment to reducing or waiving taxes and tariffs on imported antimalarial medicines, insecticide-treated nets and other essential malaria commodities. In 2006, the Declaration was complemented by the Abuja call for accelerated action towards universal access to HIV/AIDS, tuberculosis and malaria services in Africa.

39. By 2015, it is estimated that 12 countries in the WHO African region reduced malaria case incidence by more than 50 per cent. Nine countries (Algeria, Botswana, Cabo Verde, Eritrea, Namibia, Rwanda, Sao Tome and Principe, South Africa and Swaziland) reduced their case incidence by more than 75 per cent.

Ethiopia, Zambia and Zimbabwe reduced their case incidence by 50-75 per cent. In other African countries, it has not been possible to reliably assess malaria trends owing to incompleteness or inconsistency in reporting.

World Health Assembly targets

40. In 2005, the World Health Assembly set the target of reducing the malaria burden by 50 per cent between 2000 and 2010, and by 75 per cent by 2015. According to the *World Malaria Report 2015*, 57 of the 106 countries and territories that had ongoing malaria transmission in 2000 achieved a 75 per cent reduction in malaria mortality by 2015. Globally, the estimated number of malaria deaths was reduced by 48 per cent between 2000 and 2015. To achieve faster progress towards this target, efforts need to be substantially expanded in the 15 highest-burden countries, which together account for an estimated 78 per cent of malaria mortality.

Global Malaria Action Plan goals

41. The Roll Back Malaria Partnership's Global Malaria Action Plan was launched in 2008 to catalyse support for malaria control and elimination and to rally partners around a common plan of action. The objectives of the Plan, as revised in 2011, were to reduce global malaria deaths to near zero by the end of 2015, to reduce global malaria cases by 75 per cent by end-2015, and to eliminate malaria by 2015 in at least 8 to 10 new countries and in the WHO European region. The Roll Back Malaria Partnership called for an estimated $5.1 billion annually to ensure universal coverage of malaria interventions. This funding target could not be fully achieved, partly because of decreases in global health and development funding, triggered by the global financial crisis.

42. As figures cited above have shown, there has been steady progress towards all of these ambitious goals. To move closer to attaining the first two goals of the Plan, an urgent and significant expansion of malaria financing would be required, in particular in the highest burden countries. Meanwhile, the third goal has already been met: 11 new countries (within and outside of the European region) have reduced local malaria transmission to zero since 2008 (Argentina, Azerbaijan, Costa Rica, Georgia, Iraq, Kyrgyzstan, Paraguay, Sri Lanka, Tajikistan, Turkey and Uzbekistan). Three others have been certified by WHO as free of malaria since 2008 (Armenia, Morocco and Turkmenistan). For the first time since WHO began keeping score, the European region reported zero indigenous cases of malaria in 2015.

V. Recommendations

43. A concerted and coordinated global effort will be needed to substantially reduce malaria transmission, morbidity and mortality by 2030 and achieve the targets set by the WHO Global Technical Strategy for Malaria (2016-2030). Progress can be accelerated through a multi-pronged response: by a major expansion of currently available life-saving interventions; by making malaria a higher political priority; by increasing accountability; by strengthening regional and cross-border collaboration; and by ensuring that the development and use of new tools and approaches are maximized.

44. The expansion of malaria interventions can be used as an entry point for strengthening health systems, including maternal and child health services and

laboratory services, and to build stronger health information and disease surveillance systems. A further scale-up of integrated community case management in the highest burden countries, and a strengthening of integrated delivery systems for malaria prevention tools, would be a cost-effective solution to help to bridge systems gaps until health infrastructures are further strengthened.

45. There is an urgent need to increase the availability of financing for malaria efforts through both traditional and innovative financing tools to alleviate the suffering caused by this disease. Only through substantial scale-up and sustaining of coverage can countries prevent malaria resurgences and move towards the ambitious 2030 malaria targets. Adequate and predictable financing is also essential for recent successes to be protected. If countries were to fall back on existing levels of intervention coverage, this could quickly erase much of the gains and investments that have been dedicated to this cause.

46. Endemic countries are urged to increase the domestic resources they make available to combat the disease. It is also recommended that they review and strengthen national strategic plans in line with WHO technical recommendations, and embed those firmly in national health sector and development plans. To achieve better impact and to ensure that successes are sustained, countries should increasingly adopt a multisectoral approach to combating the disease, and build on synergies with other development priorities.

47. Global development partners and endemic countries should strengthen efforts to address emerging biological threats to malaria control. Parasite resistance to artemisinin can be prevented through the implementation of WHO recommendations in the Global Plan for Artemisinin Resistance Containment. Strong political commitment is required to launch a coordinated and renewed effort to phase out the use of oral artemisinin-based monotherapies and to remove from markets antimalarial medicines that do not meet WHO prequalification standards. The emergence of insecticide resistance can be controlled through the adoption of recommendations contained in the Global Plan for Insecticide Resistance Management in Malaria Vectors.

48. There is a critical need to strengthen malaria surveillance and data quality in all endemic regions to enable ministries of health to direct financial resources to populations most in need, and to respond effectively to disease outbreaks. Given the plethora of partners on the ground, mechanisms for country-based coordination of technical assistance should be strengthened to achieve alignment over the best approaches to implement WHO technical guidance. Additional financing is needed to support the sharing and analysis of best practices to address urgent programmatic challenges, improve monitoring and evaluation, and conduct regular financial planning and gap analysis.

49. The contribution of the scientific community and the private sector remain essential: new products such as improved diagnostic tools, more effective medicines, new insecticides and more durable insecticide-treated bednets are all fundamental to ensuring sustained progress in efforts to combat the disease. The remarkable progress against malaria can only be maintained through a concerted and focused multi-stakeholder effort, built on the foundation of global political commitment, continuous scientific advancement and vigorous innovation.